

ILLINOIS COMMERCE COMMISSION

DOCKET No. 15-_____

DIRECT TESTIMONY

OF

JERRY A. MURBARGER

Submitted On Behalf

Of

AMEREN TRANSMISSION COMPANY OF ILLINOIS

September 22, 2015

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I. INTRODUCTION

Q. Please state your name, address and current position.

A. My name is Jerry A. Murbarger. My business address is 370 S. Main Street, Decatur, Illinois 62523-1479. I am currently a Transmission Design Specialist in the Transmission Line Design group for Ameren Services Company (Ameren Services). Ameren Services provides various services to Ameren Transmission Company of Illinois (ATXI or the Company) and to other Ameren Corporation (Ameren) subsidiaries. Ameren Services, on behalf of ATXI, is responsible for designing the new 345 kilovolt (kV) electric transmission line running generally across central Illinois from Missouri to Indiana (the Illinois Rivers Project or the Project).

Q. Please summarize your educational background and professional experience.

A. A summary of my educational background and professional experience is attached as an Appendix to my testimony.

Q. What are your duties and responsibilities in your present position?

A. My duties include designing transmission line projects for ATXI and other Ameren affiliates. These duties include assisting with selecting line routes that balance cost effectiveness and environmental impacts, ensuring that line design meets National Electrical Safety Code

(NESC) requirements, preparing baseline project cost estimates, assisting in management of project costs, and serving as the technical lead in resolving issues that may arise during construction. While the scope of the transmission projects in which I am involved varies, each one includes the following elements: design of the transmission line structures to be used, selection of transmission hardware, development of technical drawings, procurement of materials, scheduling of outages, and cooperation with other departments within Ameren Services (real estate, vegetation management, environmental services and other engineering groups).

II. PURPOSE AND SCOPE

Q. What is the purpose of your testimony in this case?

A. The purpose of my testimony is to provide information regarding the route and schedule of construction for the Illinois Rivers Project. Specifically, I explain why it is imperative from a scheduling standpoint that the Illinois Commerce Commission (Commission) authorize ATXI to exercise eminent domain with regard to certain properties along the approved route for the segments of the Project between Meredosia and Pawnee and Quincy and Meredosia¹, where negotiation efforts for land rights have been unsuccessful (the Unsigned Properties). I also discuss ATXI's construction plan and schedule for the Meredosia to Pawnee and Quincy to Meredosia segments of the Project. ATXI witness Mr. Trelz also addresses the need for eminent domain authority for the Unsigned Properties, among other matters, in ATXI Exhibit 1.0.

III. STATUS OF LINE DESIGN

¹ Although this filing contains landowners primarily along the Meredosia to Pawnee segment of the Project, it also presents a request for 8-509 authority over one landowner between Quincy and Meredosia: George and Angela Lepper (ILRP_QM_AD_009).

43 **Q. Can you describe generally the process referred to as “final line design”?**

44 A. Final line design consists of choosing the type and size of each transmission structure,
45 choosing all necessary hardware, and identifying a proposed location for the same. Choosing the
46 right structures and having the proper structure location ensures a span length that will maintain
47 the proper ground clearance required by the NESC. Choosing the proper hardware and
48 insulators helps assure that the line will operate safely and reliably.

49 **Q. What is the status of final line design for the Meredosia to Pawnee segment of the**
50 **Project?**

51 A. The final line design is near completion on this line segment. Approximately 85% of the
52 steel structures have been ordered. The related line hardware material will be ordered in late fall
53 2015. Test borings will begin soon on parcels on which easements have been obtained. These
54 test borings are used to obtain information to help with foundation design. Test borings on the
55 Unsigned Properties will be completed as soon as the necessary property rights can be acquired.
56 Any delay in the acquisition of the Unsigned Properties may delay structure foundation design,
57 which, in turn, may further delay or complicate construction of the Meredosia to Pawnee portion
58 of the Project.

59 **Q. What is the status of final line design for the Quincy to Meredosia segment of the**
60 **Project?**

61 A. The final line design is near completion on this line segment. Approximately 90% of the
62 steel structures have been ordered along with the related line hardware material. Test borings are
63 being performed on parcels on which easements have been obtained. These test borings are used
64 to obtain information to help with foundation design. Test borings on the Unsigned Properties

will be completed as soon as the necessary property rights can be acquired. Any delay in the acquisition of the Unsigned Properties may delay structure foundation design, which, in turn, may further delay or complicate construction of the Quincy to Meredosia portion of the Project.

IV. PROJECT SCHEDULE

Q. What is the near-term construction timeline for the Meredosia to Pawnee and Quincy to Meredosia segments of the Project?

A. Foundation installation for the Quincy to Meredosia segment began in March 2015. Foundation installation for the Meredosia to Pawnee segment is anticipated to begin sometime in March 2016. ATXI will begin installing structures and conductors once enough consecutive foundations are installed. The timeline for these activities aligns with the anticipated 2017 in-service date for the Meredosia to Pawnee segment and the anticipated 2016 in-service date for the Quincy to Meredosia segment, signifying that these portions of the Project are on schedule from a design and construction standpoint.

Q. Generally, how long will it take to construct the Meredosia to Pawnee segment?

A. The Meredosia to Pawnee segment is a total of 76.4 miles long. ATXI has scheduled approximately 20 months to construct the Meredosia to Pawnee segment. However, this construction timeline may vary, depending on how many construction crews are utilized.

Q. And how long will it take to construct the Quincy to Meredosia segment?

A. The Quincy to Meredosia segment is a total of 45.8 miles long. ATXI has scheduled approximately 20 months to construct the Quincy to Meredosia segment. However, this construction timeline may vary, depending on how many construction crews are utilized.

86 **Q. How does the progress of land rights acquisition relate to the process of materials**
87 **acquisition?**

88 A. It can take up to 24 weeks for steel poles to be delivered to the job site, after they are
89 ordered. Dead-end structures are specially designed and can also take up to 24 weeks for
90 delivery. Each steel structure must be a certain height to maintain NESC code clearances, and
91 the necessary height depends on the location of the structure; therefore, each structure must be
92 installed in a specific location. ATXI must get the structures on order as soon as practicable to
93 stay on course with the proposed construction schedule.

94 **Q. Would the failure to obtain all necessary land rights along the portions of the**
95 **Meredosia to Pawnee and Quincy to Meredosia segments of the Project in a timely manner**
96 **delay the construction schedule?**

97 A. Yes. If ATXI is unable to acquire the needed easements in a timely manner, the
98 construction schedule could be delayed. As explained by ATXI witness Mr. Trelz, if ATXI is
99 unable to acquire the Unsigned Properties by negotiation, it may take approximately one year to
100 complete an eminent domain proceeding in circuit court. Given this anticipated timing, ATXI is
101 requesting eminent domain authority now in order to allow time to complete the circuit court
102 process and then complete construction consistent with Project in-service dates. Any delay in
103 acquiring land rights could have substantial implications for the timely completion of the Quincy
104 to Meredosia and Meredosia to Pawnee segments, and the entire Illinois Rivers Project.

105 **Q. What are the consequences of a delay in the construction schedule of the Meredosia**
106 **to Pawnee and Quincy to Meredosia segments?**

107 A. The Project is necessary to address transmission and reliability needs in an efficient and

equitable manner, and promote the development of an effectively competitive electricity market, as found by the Commission in Docket 12-0598. Delay in completing these segments will result in delays in completing the entire Project. The benefits of the Project, including a more robust and reliable electric grid throughout the entire Project area, will be delayed.

Q. How would delay of the Meredosia to Pawnee and Quincy to Meredosia segments result in delays in construction of the Project as a whole?

A. ATXI prefers to utilize the same contractor crews to construct each segment of the Project. This practice is beneficial because the contractor gains experience from previous line work and is more efficient. Delays to a single segment may result in a trained labor crew standing idle, delaying construction of that segment, as well as the successive segments to which that crew has been assigned.

V. RIGHT-OF-WAY WIDTH

Q. What permanent easement width is required to construct the Illinois Rivers Project where rights-of-way will be acquired?

A. As I explained in my direct testimony in Docket 12-0598, a 150-foot wide permanent easement is generally required to provide adequate clearance from the 345 kV transmission line conductors to the edge of the right-of-way for operational and maintenance purposes.

Q. Is a 150-foot wide easement generally required for a 345 kV line?

A. Yes, for long span construction. A 150-foot easement will provide adequate NESC clearances from the conductor to any buildings, trees or vegetation on the edge of the right-of-way (NESC Rule 234C.1). Maintenance of this clearance is necessary for safe operation of the line. Ameren Services has developed a document titled Transmission Vegetation Management

130 Program FAC-003-2 in response to NERC mandates. This document specifies all the vegetation
131 clearance requirements.

132 **Q. Will ATXI require construction easements to construct the Transmission Line?**

133 A. Potentially, yes. During the installation of the wires, the construction contractor may
134 need to set up equipment outside the 150-foot wide permanent easement. Depending on where
135 this might occur, ATXI may need to obtain additional, temporary construction easements. If
136 such easements are needed, they would be up to 150 feet in width, in addition to the 150-foot
137 permanent easement area.

138 **Q. Does ATXI require other access rights for the easement area?**

139 A. In some circumstances, yes. In order to operate and maintain the line after it is
140 constructed, ATXI requires access to the easement area. If terrain and other factors make access
141 over the 150-foot permanent easement infeasible, ATXI may seek separate rights of access.
142 These separate access rights typically include rights of ingress and egress across a landowner's
143 property that allow ATXI's personnel to reach the easement on which the line is located for
144 purposes of line repair or maintenance. ATXI may also require rights to access vegetation
145 adjacent to the permanent easement area for purposes of vegetation management needed to
146 ensure safe operation of the line.

147 **Q. When the electric line parallels a road right-of-way, but is to be placed on private**
148 **land, how far from the edge of the right-of-way will the centerline of the support structures**
149 **be placed?**

150 A. The centerline of the tangent structures will typically be placed as close as practical to the

151 edge of the road right-of-way. This is typical practice in the industry for roadside construction of
152 transmission lines. There will be exceptions when the highway alignment shifts or when existing
153 structures, utilities or facilities interfere with such placement.

154 **VI. CONCLUSION**

155 **Q. Does this conclude your direct testimony?**

156 **A.** Yes, it does.

APPENDIX

**STATEMENT OF QUALIFICATIONS
JERRY A. MURBARGER**

I received an Associate of Applied Science degree from Lincoln Trail College in 1976. I worked for different companies until early 1989 in the metal fabrication industry designing material-handling equipment and high pressure American Society of Mechanical Engineers “ASME” Code Section VIII Pressure Vessels. In early 1989, I joined Soyland Power Cooperative (Soyland) as a draftsman/surveyor and advanced to engineering technician designing substations and transmission lines. As an engineering technician at Soyland, I was responsible for the design of several 69 kV and 138 kV transmission lines. I was involved in all aspects of the projects including establishing the line route, surveying the route, designing the line, ordering material, writing construction specifications, construction inspection and closing all project documents. I started with Illinois Power Company (Illinois Power) now AIC, in October 2000. Since then, I have been involved with maintenance and/or design of transmission lines and sub-transmission lines. Ameren considers transmission lines as those above 100,000 volts. The majority of my time has been in the maintenance area, where I have gained a solid background in the design and construction techniques of transmission lines. I am familiar with AIC’s transmission line design standards and design considerations including things such as: types of structures, hardware requirements, types of conductors, span limitations, structure location considerations, construction issues, safety and clearance requirements, and real estate considerations. Some of my responsibilities in the transmission maintenance group were to collect the semi-annual Aerial Patrol reports and Groundline Inspection Reports on AIC’s transmission lines. I typically participated in most of the aerial inspections in order to assess the condition of existing structures and their hardware. These inspection reports typically involved

summarizing any damage to structures such as broken or damaged cross arms, x-braces, v-braces, hardware, insulators, dampers, guy wires, as well as pole top deterioration. I was responsible for collecting all the reports and compiling the data. I was in charge of the wood pole Groundline Inspection program for the transmission structures. The purpose of this program is to ensure the integrity and reliability of our transmission structures. Although I did some inspections, the majority of the inspections were performed by independent companies who submitted their inspection reports to me. I identified which poles could be repaired and which ones needed to be replaced. If a pole had to be replaced, I would utilize AIC's standards to determine the required pole type and class to make the repairs. I determined the required repairs utilizing AIC standards, prioritized the repairs, prepare a material list, made a construction cost estimate for the repairs, and then submitted this information for budget approval. Once the budget was approved, I had the drawings updated, ordered the material and put a construction package together. I would obtain bids from several contractors, evaluate the bids and get approval to proceed with construction. It was my responsibility to follow the contractors' work through construction. Working through this process has given me a solid background in the design and construction requirements of transmission lines.

In addition to my daily responsibilities, I was part of AIC's emergency response team, which was established to assist with storm-related or emergency projects. Familiarity with AIC's transmission line design and construction standards was required to effectively perform this task.

With my wide range of transmission line maintenance experience, I transferred to the Transmission Lines Design Group of Ameren Services following Ameren's acquisition of Illinois Power in 2004. Ameren Services is a subsidiary of Ameren Corporation (Ameren) and

provides technical, advisory and financial services to other Ameren subsidiaries including AIC and ATXI. Since then, I have been working on design of new transmission line projects including cost estimates, route selection, and modifications to existing facilities. On this project, I will be a member of the transmission line design team for the proposed Transmission Line.